

SWITCHING MODE VOLTAGE REGULATOR AND METHOD THEREOF

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ABSTRACT OF THE DISCLOSURE

A switching mode voltage regulator comprises a pulse width modulator and an adjustable one-shot circuit to generate an adjustable signal based on an input voltage, an adjustable voltage, and a PWM signal from the pulse width modulator at light loading to switch a high-side switch of an output stage in the voltage regulator. The ON duty of the adjustable signal is controlled by the adjustable voltage, such that it will be larger than that of the PWM signal and as a result, the number of switching the switch of the output stage is decreased, thereby reducing the switching loss and improving the efficiency of the voltage regulator.